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A LETTER

TO THE

Officers of the Army

UNDER ORDERS FOR, OR THAT MAY HEREAFTER BE SENT,

TO THE

West Indies,

ON THE

MEANS OF PRESERVING HEALTH,

AND

PREVENTING THAT FATAL DISEASE

THE

YELLOW FEVER.

By STEWART HENDERSON,

SURGEON OF HIS MAJESTY'S 46th REG. OF FOOT; AND MANY YEARS A SURGEON IN THE ROYAL NAVY.

LONDON:

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LETTER

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By SURGEON HUNTINGDON,

AUTHOR OF SEVERAL MEDICAL WORKS, &c. &c.

MANY YEARS A RESIDENT IN THE EAST INDIES.

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[Price Sixpence, or One Shilling and a Half.]

Entered at Stationers Hall.

TO THE

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UNDER ORDERS FOR THE

WEST INDIES.

GENTLEMEN,

FROM the repeated melancholy accounts received for the laſt twelve months from that part of the world you are now deſtined to, not only of the great mortality which has happened among the privates, but the officers, have no doubt impreſſed your mind with ideas of the country and your ſituation, not of the moſt pleaſant nature; but this may have one good effect, by making you liſten more attentively to the means pointed out for preventing this fatal diſeaſe, which has proved ſo deſtructive to ſo many of our brave countrymen, and at the ſame time induce you to be more inclined not to neglect prevention, which I am convinced is greatly within your power. It is true, thoſe iſlands have been emphatically, and often too

juſtly, ſtiled the grave of the Britiſh army; but I believe at no period ſince their diſcovery has this been ſo ſtrongly verified as of late. Few among us but have to regret the loſs of a friend or an acquaintance; but it is to be hoped ere this the cauſe which produced it has in a great degree ſubſided, and of courſe the effect ceaſed; but as the Weſt Indies have ever proved unſalutary to the young military, particularly the Britiſh, who from habits and manner of living ſuffer more from emigration to ſouthern climates than any other nation —ſome inſtructions relative to the cauſe and prevention of diſeaſe may at this time be neceſſary; and I hope it will not be deemed improper in being offered by one, who, though he cannot claim high rank in the ſervice, yet has had opportunities of becoming acquainted with the preſent ſubject, from having been eight years among the Weſt India iſlands, Engliſh and French, employed with large fleets and armies during the laſt war, and ſince the peace; and he wiſhes to aſſure you that his only motive for writing it is the hope that it may prove uſeful.

There are periods where great ſalubrity has been experienced in the Weſt Indies, eſpecially on board of our ſhips of war; as an inſtance I ſhall beg leave to relate, that during the laſt three years I was at Jamaica, then ſurgeon of a thirty-two gun frigate, (the Aſtræa) we ſuffered leſs from diſeaſe than I am ſure had we been in any harbour in England; nor do I think any village in great

Great Britain containing the ſame number of inhabitants ſuffers ſo little from diſeaſe: not a man died on board, and only eight at the hoſpital, four of thoſe were from accidents, ſo that four can only be ſaid to have died from diſeaſes of the climate; this may be known by the ſhip's books at the navy office. The reſt of the fleet were, I believe, equally healthy, but in this ſhip I can ſpeak more confidently, that every precaution was made uſe of to prevent diſeaſe by the judicious orders of the Captain and attention of the Firſt Lieutenant, without which all our medical efforts would have availed but little.

As the future health of the men and exemption from diſeaſes of the country will in a great meaſure depend on the ſtate they arrive in, and as their ſervices may be immediately wanted, it is of the utmoſt conſequence that they arrive healthy, otherwiſe the purpoſes of government in ſending them out muſt be defeated; for health, when once loſt, is not ſoon recovered in that country. Beſides, when ſickneſs prevails in a ſhip there is no one ſecure from it; officers will, therefore, conſider of what importance it is to employ every ſalutary means which by experience have been found uſeful; and the ſatisfaction they will have in landing with men in health and ſpirits fit for any enterprize, will compenſate for the trouble they had in attending to them while on board; beſides, it is a duty we owe to our country, and the ſervice we have engaged in.

Before the ſoldiers are embarked, which ſhould not take place if poſſible until a few days before they ſail, a ſtrict inſpection ſhould be taken by the ſurgeon to prevent any man from being ſent where there is reaſon to ſuſpect latent ſeeds of infectious diſeaſe are lurking about him, which may be judged from his unſalutary appearance viſible to every medical obſerver, and from a knowledge that he had been lately in priſon, or any other confined place where that inſidious diſorder the gaol fever never fails to reign, and often remains dormant for a conſiderable time until brought into action by ſome exciting cauſe; therefore too great care cannot be taken to prevent its introduction on board, or being generated there, which has happened ſeveral times of late from the ſhips being too much crowded, and neglect of cleanlineſs and ven la-tion; but it is to be hoped will now ſeldom make its appearance, ſince the tranſports which I underſtand are all fitted up agreeable to Sir Jerome Fitzpatrick's plan, which was ſometime ago adopted by government, as well as the plan I recommended at Chatham for preventing its introduction into that garriſon, and ſpreading its baneful influence to other parts of the army.

The tubes for conveying air into the births ſhould be kept conſtantly open in the day; the hammocks and bedding to be frequently brought upon deck, to be opened and well aired; the deck below ſhould be kept perfectly clean and dry, and no waſhing permitted but when fires can with ſafety be made

made in kettles to dry it. Waſhing the births now and then with hot vinegar will be uſeful—the men to be kept as much as poſſible upon deck, as confinement is unnatural to a ſoldier, tending to deſpondency and to pruduce diſeaſe. Exerciſing them often at their arms when it can be done. Amuſements and innocent diverſions of every kind ſhould be encouraged by the officers. When arrived in the warm latitudes, the cold bath ſhould be uſed, by making them every morning throw buckets of water over each other, which will be uſeful in not only keeping their bodies clean, but prevent too great relaxation.

The next thing to be conſidered is their diet. Soldiers on board of tranſports have but two thirds allowance; perhaps of ſalted meat this may be ſufficient; but I think it would be uſeful if the other part was made up of flour, or any other vegetable aliment. And if I am well informed, and recolleſt right, there is one thing which in my opinion would tend to the good of the ſoldier and the ſervice if done away; that is, putting them under ſtopages while they remain on board: it is true, they have no uſe for money while at ſea, but that money if properly laid out for them before they ſailed, in purchaſing a few neceſſaries, ſuch as tea, ſugar, onions, muſtard, potatoes, and pepper, would aſſiſt greatly in preventing a ſcorbutic tendency in their habits, which living on a ſalted diet for ſeveral months never fails to produce, and ren-

ders

ders them more liable to be attacked with the diſorders of the country.

A ſupply of neceſſaries for thoſe who may fall ſick (and ſeveral there will be in ſpite of every exertion) ſhould be provided out of the regimental hoſpital fund, to be under the care and direction of the ſurgeon; and where there is none, ſome careful perſon appointed by the commanding officer: theſe neceſſaries to conſiſt of tea, ſugar, rice, portable ſoup, ſago or tapioca, lemon juice, not forgetting the beſt of all remedies, ſome good wine.

There is one part of their diet which I would recommend to be altered---inſtead of bourgou, made of oatmeal, three times a week, to give them watergruel every morning for breakfaſt, as is done in moſt of our men of war. I need not add how much will depend on the officers that theſe things are ſtrictly attended to, and the officer of the day, who viſits the deck below, paying great attention to that part of duty. You are in no danger of being ſeized with diſeaſe ſo long as the men continue healthy, by having plenty of room, air, and being provided with good wine, and proper neceſſaries for the voyage; but it will be prudent to live temperately, to prepare the conſtitution for the change it muſt undergo from the tranſition of climate; and the effect of heat, combined with other cauſes, tending to bring on febrile complaints. In young, healthy, and plethoric habits, bleeding may be freely and ſafely made uſe of, and a few doſes of purging phyſic may be taken; theſe are the only

things which appear to me neceſſary for you while you remain on board. When diſembarked, ſome farther directions will be neceſſary to guard you againſt thoſe diſeaſes which Europeans are ſo ſubject to on their firſt arrival.

The yellow fever, as it is called, which has made ſuch dreadful havoc in the Weſt Indies, is ſuppoſed by many to have been brought from Africa or America; but, in my opinion, it is a diſorder which prevails more or leſs at all times in thoſe iſlands, and other hot climates; but from a certain ſtate of the air at times become more generaly and having lately a greater number of ſubjects to act upon. Thoſe who have kept a Metereological Regiſter, no doubt, can account for its prevalence; there has been a great deal of phlogiſton, or inflammatory matter, in the air, occaſioned by a want of the uſual rains, and ſqualls which prevail in that country, and which will be removed when the natural ſeaſons return. To prevent the attack of this fever, all ſtimulating powers muſt be carefully avoided, ſuch as violent exerciſe in the ſun, to eat ſparingly of animal food, and drink moderately of wine, not exceeding a pint of Madeira in the day, and no ardent ſpirits; if poſſible, avoid being expoſed to the night air: but when duty obliges you, take care to be warm cloathed; a glaſs of tincture of bark, and ſmoaking a ſegar, will be uſeful on theſe occaſions, likewiſe a fire near you when it can be done: but the great and beſt preventive will be, temperance and regularity of living. Unfortu-

nately

nately in that country there are not many inducements to quit the faſcinating bottle, unleſs you poſſeſs great reſolution, and are well convinced of its baneful effects; for there are few amuſements, no operas, plays, and little ſociety, except among yourſelves; it therefore behoves commanding officers, who have experience and judgment, to diſcourage drinking, by authority, example, and precept. I do not mean by this, that officers drink to exceſs; but I may venture to ſay, frequently indulge too far in a country which cannot be done with impunity. Among the privates, the immoderate uſe of ardent ſpirits has been always conſidered the leading cauſe of the ſickneſs and mortality which has happened among them; and I have remarked, that ſickneſs prevailed in proportion to the opportunities they had of committing irregularities: as a proof of this I muſt obſerve, that when I was in India, and in the Coimbatore country, with the army commanded by Colonel Fullarton, there was for ſeveral weeks no arrack for the troops, during which time the ſick liſt conſiderably decreaſed, although the duty of fatigue was great, and the ſeaſon unfavourable; the days being exceſſive hot, the evenings and mornings chilly and damp. It is true, the men's ſpirits were kept up and animated with the ſucceſs which attended the military operations of that army, and their minds were filled with the golden proſpect of getting immenſe treaſure in Tippoo's Capital; theſe circumſtances, we might ſuppoſe, would have had

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conſiderable influence in retarding diſeaſe, but they were not ſufficient to counteract the baneful effects of that deſtructive poiſon, for a few days after receiving a ſupply of arrack from Calicut, the ſick liſt again returned to its uſual ſtandard; but I muſt ſay, it is the great and only failing I know in a Britiſh ſoldier—too great a propenſity to liquor, which no puniſhment, or even certain deſtruction, can prevent. In the Weſt Indies, where it is ſo plentiful and eaſily procured, officers will have great merit if they can prevent the men from the abuſe of it. Expoſure to the night air, by obſtructing perſpiration, when the body has been overheated, either by violent exerciſe in the ſun, or the uſe of ſtimulating liquors, ſeldom or ever fails in new-comers to produce this fatal diſeaſe the yellow fever.

The conſtitutions of our ſoldiers from climate and manner of living are naturally robuſt, therefore more liable to be ſeized with fever, attended with that violent re-action which increaſes the tendency to putrefaction, and it is remarked that the ſtrongeſt men in a regiment, the grenadiers, are the firſt to ſuffer. It commences its attack with all the ſymptoms of inflammatory fever, great heat, and univerſal pains, thirſt increaſed, tongue parched and dry, pulſe full and hard, the face flushed, and eyes appear inflamed, ſtrong pulſation of the carotid arteries, and evident increaſed impetus and determination of blood to the head; conſiderable heat and pain is felt about the region of the ſtomach

mach with great irritability of that organ which rejects every thing taken into it—if theſe ſymptoms are not arreſted on their firſt onſet, from their violence and rapidity in twenty-four or thirty hours, the ſecond ſtage or fatal termination commences, with great debility, with evident derangement of the brain and diſſolution of the ſmall veſſels about the head and ſtomach, which increaſes in ſpite of every medical effort to ſtop their progreſs, and generally proves fatal on the third or fourth day; not one in a hundred I believe recovers after the ſecond ſtage has commenced, and the remedies in the firſt have been neglected. We ſhould, therefore, in the beginning employ the moſt powerful and effectual remedies, which are large and copious bleeding, not only from the arm, but opening the temporal artery would be adviſeable; and to aſſiſt in taking off the determination of blood to the brain, the fore part of the head ſhould be ſhaved, and cloths frequently applied wet in vinegar wherein ſal-ammoniac has been diſſolved; cool air to be admitted, and no unneceſſary attendants to be permitted in the room; after plentiful bleeding has been made uſe of, a bliſter ſhould be applied to the region of the ſtomach, and a lenient purge given to carry off any acrid matter; if this cannot be retained, which is frequently the caſe, a glyſter ſhould be adminiſtered; and if the pain and irritability of the ſtomach is relieved by the bliſter, and evacuations have been procured, a doſe of James's

pow-

powder ſhould be given and repeated until a plentiful perſpiration is brought on, which ſhould be encouraged by drinking of balm, ſage tea, or chicken broth; theſe remedies, when employed in time ſeldom fail to bring on a remiſſion of the fever, and a favourable termination of the diſeaſe, requiring afterwards ſome bark and wine to remove the debility which the violence of the ſymptoms and remedies employed have occaſioned. Though I believe few recover when the putrid ſtage, I may ſay, has commenced, yet no means in our power ought to be neglected as in ſome conſtitutions the ſymptoms cannot be ſo violent, and may, therefore, yield to the remedies recommended by authors.

The other diſeaſes which the troops are more particularly expoſed to, are the remittent or marſh fever, and dyſentery; the former prevails moſt after the rainy ſeaſon. Thoſe who are obliged to be in the vicinity of marſhes expoſed to the effluvia ariſing from corrupted vegetable matter, run every riſk of being ſeized with this fever: if you have choice of ſituation take care to be to windward of it, and when tents are to be pitched, either for the healthy or ſick, this precaution ſhould not be overlooked: but as your duty on ſervice will frequently put it out of your power to attend to thoſe circumſtances, to guard againſt the effect of this bad air, what I recommended in a former part of this letter will be uſeful. A fire near your tent, ſmoaking a ſegar and a glaſs of tincture of bark,

or any warm aromatic, eſpecially in the morning, when this air has moſt influence.

The dyſentery is the conſtant attendant on camps, and frequently the ſcourge of an army; but it has not been ſo common or deſtructive to our troops in the Weſt Indies ſince the ſoldiers have been obliged to wear flannel waiſtcoats next their ſkin during the rainy ſeaſon and for ſome time after: care ſhould be taken that every man is provided with two of theſe; it will likewiſe be proper for the officers to wear them during the wet months.

As you will be frequently expoſed to the intenſe rays of the ſun, which occaſion ſometimes violent headach, and danger of a *coup de ſoleil*, I have found this relieved and prevented by only wearing a few folds of linen under the fore part of the hat wet with vinegar, which is both cool and pleaſant.

Such are the precautions and means I would adviſe for preſerving health and preventing that fatal diſeaſe, the yellow fever, among officers and ſoldiers in the Weſt Indies; and I have no doubt, if ſtrictly followed, will be attended with every ſalutary effect, which is my ſincere wiſh.

I am,

GENTLEMEN,

Your moſt obedient humble ſervant,

STEWART HENDERSON,

Surgeon 40th Reg.

No. 8, Howard Street, Strand, London, Jan. 22, 1795.

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